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| Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary) | | | | Complete If Known | |
| | | | | Application Number | 10/506592 |
| | | | | Filing Date | September 3, 2004 |
| | | | | First Named Inventor | Andrew David Morley |
| | | | | Art Unit | N/A 1626 |
| Sheet | 1 | of | 3 | Examiner Name | Not Yet Assigned NOZAN |
| | | | | Attorney Docket Number | ASZD-P01-659 |

| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|-----------------------|--|--|--------------------------------|--|---|
| Examiner Initials* | Cite No. ¹ | Document Number | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number-Kind Code ² (if known) | | | | |
| JAN | AA | US-2004/0002495-A1 | | 01-01-2004 | Philip Sher | |
| JAN | AB | US-3,706,810 | | 12-19-1972 | AMERICAN CYANAMID | |
| JAN | AC | US-4,599,198 | | 07-08-1986 | DENNIS J. HOOVER | |
| JAN | AD | US-4,668,769 | | 05-26-1987 | DENNIS J. HOOVER | |
| JAN | AE | US-4,720,503 | | 01-19-1988 | BRUCE E. WITZEL | |
| JAN | AF | US-4,751,231 | | 06-14-1988 | WASYL HALCZENKO | |
| JAN | AG | US-4,786,641 | | 11-22-1988 | SIEGFRIED GOLDMANN | |
| JAN | AH | US-4,794,120 | | 12-27-1988 | PHILIPPE MANOURY | |
| JAN | AI | US-5,863,903 | | 01-26-1999 | KARSTEN LUNDGREN | |
| JAN | AJ | US-5,998,463 | | 12-07-1999 | BERNARD HULIN | |

| FOREIGN PATENT DOCUMENTS | | | | | | | |
|--------------------------|--------------------------|---|-----------------------------------|--|--|--|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | | † ⁶ |
| | | Country Code ³ -Number ⁴ -Kind Code ⁵ (if known) | | | | | |
| JAN | BA | WO-00/42213 | 07-20-2000 | The Research Foundation of State University of New York | | | |
| JAN | BB | WO-00/47206 | 08-17-2000 | Novo Nordisk | | | |
| JAN | BC | WO-01/05954 | 01-25-2001 | Isis Pharmaceuticals, Inc. | | | |
| JAN | BD | WO-01/23347 | 04-05-2001 | Novo Nordisk | | | |
| JAN | BE | WO-01/32654 | 05-10-2001 | Societe de Conseils de Recherches et D'Applications Scientifiques | | | |
| JAN | BF | WO-01/52825 | 07-26-2001 | Novartis-Erfindungen Verwaltungsgesellschaft M.B.H. | | | |
| JAN | BG | WO-01/68055 | 09-20-2001 | Pfizer Products Inc. | | | |
| JAN | BH | WO-01/68092 | 09-20-2001 | Pfizer Products Inc. | | | |
| JAN | BI | WO-01/68603 | 09-20-2001 | Bristol-Myers Squibb Co. | | | |
| JAN | BJ | WO-01/94300 | 12-13-2001 | Aventis Pharma Deutschland | | | |
| JAN | BK | WO-01/96311 | 12-20-2001 | Bristol-Myers Squibb Company | | | |
| JAN | BL | WO-01/96347 | 12-20-2001 | Bristol-Myers Squibb Company | | | |
| JAN | BM | WO-02/080844 | 10-17-2002 | Genzyme Corporation | | | |
| JAN | BN | WO-02/096864 | 12-05-2002 | Aventis Pharma Deutschland GmbH | | | |
| JAN | BO | WO-02/098348 | 12-12-2002 | Eli Lilly and Company | | | |
| JAN | BP | WO-02/26714 | 04-04-2002 | Takeda Chemical Industries, Ltd. | | | |
| JAN | BQ | WO-02/34718 | 05-02-2002 | Richter Gedeon Vegyeszeti Gyar Rt. | | | |
| JAN | BR | WO-03/037864 | 05-08-2003 | Japan Tobacco Inc. | | | |
| JAN | BS | EP-0846464 | 06-10-1998 | Pfizer Inc. | | | |
| JAN | BT | EP-0884050 | 12-16-1998 | Novo Nordisk | | | |
| JAN | BU | EP-0978279 | 02-09-2000 | Pfizer Products Inc. | | | |
| JAN | BV | EP-1088824 | 01-07-2004 | Pfizer Products Inc. | | | |
| JAN | BW | EP-1125580 | 08-22-2001 | Pfizer Products Inc. | | | |
| JAN | BX | EP-1134213 | 09-19-2001 | Pfizer Inc. | | | |
| JAN | BY | EP-1136071 | 09-26-2001 | Pfizer Products Inc. | | | |
| Examiner Signature | | | Date Considered | | 3-24-2006 | | |

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| Sheet | 2 | of | 3 | Attorney Docket Number | ASZD-P01-659 |

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|------------|-----|----------------|------------|------------------------------------|--|--|
| <i>JMA</i> | BZ | EP-1145717 | 05-12-2004 | Pfizer Products Inc. | | |
| <i>JMA</i> | BA1 | EP-1149580 | 02-21-2001 | Pfizer Products Inc. | | |
| <i>JMA</i> | BB1 | EP-1177791 | 07-27-2001 | Pfizer Products Inc. | | |
| <i>JMA</i> | BC1 | ES-2081747 | 03-01-1996 | Esteve Labor DR | | |
| <i>JMA</i> | BD1 | DE-4445968 | 06-27-1996 | Bayer AG | | |
| <i>JMA</i> | BE1 | WO-93/25574 | 12-23-1993 | Pfizer Inc. | | |
| <i>JMA</i> | BF1 | WO-95/24391 | 09-14-1995 | Novo Nordisk | | |
| <i>JMA</i> | BG1 | WO-96/39384 | 12-12-1996 | Pfizer, Inc. | | |
| <i>JMA</i> | BH1 | WO-96/39385 | 12-12-1996 | Pfizer Inc. | | |
| <i>JMA</i> | BI1 | WO-97/09040 | 03-13-1997 | Novo Nordisk | | |
| <i>JMA</i> | BJ1 | WO-97/31901 | 09-04-1997 | Mikael Bols | | |
| <i>JMA</i> | BK1 | WO-97/45425 | 12-04-1997 | Fujisawa Pharmaceutical Co., Ltd. | | |
| <i>JMA</i> | BL1 | WO-98/27108 | 06-25-1998 | Fuji-Sawa Pharmaceutical Co., Ltd. | | |
| <i>JMA</i> | BM1 | WO-98/40353 | 09-17-1998 | Novo Nordisk | | |
| <i>JMA</i> | BN1 | WO-98/50359 | 11-12-1998 | Novo Nordisk | | |
| <i>JMA</i> | BO1 | WO-99/26659 | 06-03-1999 | Pfizer Products Inc. | | |
| <i>JMA</i> | BP1 | WO-99/36393 | 07-22-1999 | Tanabe Seiyaku Co., Ltd. | | |
| <i>JMA</i> | BQ1 | JP 2001 089368 | | | | |
| <i>JMA</i> | BR1 | DD 200740 | 06-08-1983 | Gewald | | |
| <i>JMA</i> | BS1 | EP 697403 | 02-21-1996 | Sanofi | | |
| <i>JMA</i> | BT1 | JP 2001 206856 | 07-31-2001 | Pfizer Prod. Inc. | | |
| <i>JMA</i> | BU1 | JP 021247565 | 05-14-1990 | Hanawa Netsuden Kinzoku KK | | |
| <i>JMA</i> | BV1 | JP 04179949 | 06-26-1992 | Toray Ind. Inc. | | |

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| NON PATENT LITERATURE DOCUMENTS | | | | | | |
|---------------------------------|-----------------------|---|--|--|-----------------|----------------|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | | | T ² |
| | CA | Birch, A., et al., "Novel Thienopyrrole Glycogen Phosphorylase Inhibitors: In Vitro SAR and Crystallographic Studies," Poster, AstraZeneca UK, CVGI Research, Mereside, Atterley Park, Macclesfield, Cheshire. | | | | |
| <i>JMA</i> | CB | Crochet, R.A., et al., "Synthesis of Substituted Thieno[2,3-b] pyrroles," Vol. 11, 143-150 (April 1974). | | | | |
| | CC | Freeman, S., et al., "Effect of Glucose on Rat and Human Liver Glycogen Phosphorylase Activity and Potency of a Glycogen Phosphorylase Inhibitor." <i>Diabetes</i> , 52, Supp., 1470-P, A340. | | | | |
| <i>JMA</i> | CD | Hartman, G.D., et al., "The Synthesis of 5-Alkylaminomethylthieno[2,3-b]Pyrrole-5-Sulfonamides," <i>Heterocycles</i> , 29(10):1943-1949 (1989). | | | | |
| <i>JMA</i> | CE | Hoover, D.J., et al., "Indole-2-carboxamide Inhibitors of Human Liver Glycogen Phosphorylase," <i>J. Med. Chem.</i> , 41:2934-2938 (1998). | | | | |
| <i>JMA</i> | CF | Hudson, S., et al., "The effect of a glycogen phosphorylase inhibitor upon muscle fatigue in anaesthetised rats," <i>J. Physiol.</i> , 539:52-53 (2002). | | | | |
| <i>JMA</i> | CG | Jakobsen, P., et al., "Iminosugars: Potential Inhibitors of Liver Glycogen Phosphorylase." <i>200</i> | | | | |
| Examiner Signature | | | | | Date Considered | 3-24-2006 |

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| | | | |
|-----|----|---|--|
| | | Bioorganic Med. Chem., 9:733-744 (2001). | |
| JMW | CH | Martin, W.H., et al., "Discovery of a human liver glycogen phosphorylase inhibitor that lowers blood glucose in vivo," PNAS, 95:1776-1781 (Feb. 1998). | |
| JMW | CI | McCormack, J.G., et al., "Pharmacological Approaches to Inhibit Endogenous Glucose Production as a Means of Anti-diabetic Therapy," Curr. Pharmaceutical Design, 7:1451-1474 (2001). | |
| JMW | CJ | Oikonomakos, N.G., et al., "Allosteric inhibition of glycogen phosphorylase alpha by the potential antidiabetic drug 3-isopropyl 4-(2-chlorophenyl)-1,4-dihydro-1-ethyl-2-methyl-pyridine-3,5,6-tricarboxylate," Protein Sci., 8:1930-1945 (1999). | |
| JMW | CK | Rath, V.L. et al., "Activation of Human Liver Glycogen Phosphorylase by Alteration of the Secondary Structure and Packing of the Catalytic Core," Mol. Cell, 6:139-148 (July 2000). | |
| JMW | CL | Rosauer, K.G., et al., "Novel, 3,4-Dihydroquinolin-2(1H)-one Inhibitors of Human Glycogen Phosphorylase a," Bioorganic & Medicinal Chemistry Letters, 13:4385-4388 (2003). | |
| JMW | CM | Soman, G., et al. "Aromatic Compounds as Allosteric Inhibitors of Glycogen Phosphorylase beta," Biochimica et Biophysica Acta, 358:359-362 (1974). | |
| JMW | CN | Soman, G., et al., "The Nature of the Binding Site for Aromatic Compounds in Glycogen Phosphorylase beta," Biochem. J., 147:369-371 (1975). | |
| | CO | Teague, J., "Mobilisation of Tissue Glycogen Following Inhibition of Glycogen Phosphorylase in fa/fa Rat," Diabetes, 53, Supp. 1, A365, 1524-P | |
| JMW | CP | Treadway, J.L., et al., "Glycogen phosphorylase inhibitors for treatment of type 2 diabetes mellitus," Exp. Opin. Invest. Drugs, 10(3):439-454 (2001). | |
| | CQ | Turnbull, A., et al., "Pharmacological Inhibition of Glycogen Phosphorylase (GP) Lowers Plasma Glucose in Rat Models of Type 2 Diabetes," Diabetes, 52, Supp., 1485-P, A343. | |
| JMW | CR | Venkatarangan, P., et al., "Prediction of Ligand-REceptor Binding Thermodynamics by Free Energy Force Field Three-Dimensional Quantitative Structure-Activity Relationship Analysis: Applications to a Set of Glucose Analogue Inhibitors of Glycogen Phosphorylase," J. Med. Chem., 42:2169-2179 (1999). | |
| JMW | CS | Vertigan, H., "Impact of cell glycogen content on modulation of hepatocyte glucose metabolism by pharmacological agents," Diabetes, 47, Supp., 589, A214. | |

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